

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of) **MAIL STOP**
Christian M. Stich et al.) **APPEAL BRIEF - PATENTS**
Application No.: 10/574,948) Group Art Unit: 2192
Filed: January 11, 2007) Examiner: Marina Lee
For: SYSTEM AND METHOD FOR) Appeal No.: _____
AUTOMATICALLY INSTALLING)
VERIFYING AND CONFIGURING)
FUNCTIONALITIES IN THE)
SYSTEM COMPONENTS OF A)
DISTRIBUTED NETWORK)

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is from the decision of the Primary Examiner dated March 16, 2011 finally rejecting claims 1-16, which are reproduced as the Claims Appendix of this brief.

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The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Table of Contents

I.	Real Party in Interest	2
II.	Related Appeals and Interferences	2
III.	Status of Claims	2
IV.	Status of Amendments	2
V.	Summary Claimed Subject Matter	2
VI.	Grounds of Rejection to be Reviewed on Appeal	7
VII.	Argument.....	7
VIII.	Claims Appendix.....	11
IX.	Evidence Appendix.....	11
X.	Related Proceedings Appendix	11
XI.	Conclusion.....	12

I. Real Party in Interest

ABB Patent GmbH is the real party in interest, and is the assignee of Application No. 10/574,948.

II. Related Appeals and Interferences

Appellants' legal representative, or assignee, does not know of any other appeal or interferences which will affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

The application contains claims 1-16. Claims 1-16 are pending and stand rejected. As such, this appeal is directed to the rejection of claims 1-16.

IV. Status of Amendments

There were no amendments submitted subsequent to the final Office Action.

V. Summary Claimed Subject Matter

The present disclosure relates to the automatic installation, verification and configuration of functions in components of a distributed network, such as a distributed system of an automated processing plant wherein functionality can be distributed across many system nodes. The system components can be, for example, numerous operator stations, engineering stations, archiving stations and/or controller stations. In known systems, installation of specific software on each of the many components in an automated process plant is performed manually, with the

relationships and dependencies between system components involving extensive expert knowledge. This installation has also involved significant administrative overhead. Exemplary embodiments of the present invention address the complexity of specifying a distributed system so that distributed functionalities can be automatically, effectively and efficiently installed, verified and configured.

According to exemplary embodiments, rules are specified to calculate a set of software packages for each of the plural system nodes which are used to create a run-time environment topology. A set of system components which are related to and/or dependent on each other can include distributed system nodes (e.g., computers) which are connected via a network. Each system node can run an operating system, application software, network connectivity and/or include embedded functionality of the distributed system.

Referring to Appellants' Fig. 2 exemplary embodiment, an automated system sets up a distributed network from empty computers to an installed, configured and operative network. Software packages which are dependent on one another are automatically distributed over the various system components. The system components automatically check and configure specified installation, verification and/or configuration files in a prescribed order and manner, such that the system configured components will form a fully operational system.

Appellants' exemplary embodiments provide a procedure to setup a system by transforming unprogrammed computers to a fully installed, configured and operative system. The procedure can automate the installation, and include a system check for prerequisites whereby the capability of system nodes can be logged and proposals developed to add functionality for running system software of each particular node. By following an outlined procedure, the distributed system will

be able to run. Planning options for a human planner can be guided by an underlying knowledge-based planning of the domain topology (i.e., rules and dependencies of the system software).

According to Appellants' exemplary embodiments, an automated procedure sets up and configures a whole system. Software packages which are dependent on one another can be installed together, distributed over the various system components. This can eliminate conflicts and time-consuming configuration operations within individual system components. By using the automated procedure, expert knowledge of the system from a human operator is not required.

Pursuant to 37 C.F.R. §41.37(1)(c)(v), the subject matter of independent claims 62 and 74 is cross-referenced to the specification and/or drawing figures in the following table. The following table is not to be construed as a representation that the portions of the disclosure identified below constitute the sole basis for support for the claimed subject matter.

Claim	Disclosure
1. A system for automatically installing, verifying and configuring functionalities, stored in installation, verification and/or configuration files, for system components connected in a distributed network, where the system comprises:	Page 1, lines 7-13 ; Figure 1
a system planning tool for creating, checking and configuring the installation, verification and/or configuration files for respective system components that are network nodes in the distributed network, wherein the system planning tool includes:	Page 3, lines 4-11; Figure 1
a user interface for transmitting selected system	Page 3, lines 13-19; Figure 1,

options to a planning logic unit and to a data management unit,	the user interface 10
the planning logic unit being configured for using a data and rule manager integrated in the data management unit to produce installation, verification and/or configuration plans from the system options, the installation, verification and/or configuration plans for further processing in the data management unit, and	Page 8, lines 10-15; Figure 1, the planning logic unit 20
the data management unit being configured for using an integrated data generator to generate and configure software packages being dependent on each other, the software packages comprising installation, verification and/or configuration files from the system options in the user interface, system information stored in the planning database, and the installation, verification and/or configuration plans produced by the planning logic unit, and for ascertaining installation steps for transmitting functionalities stored in the installation, verification and/or configuration files of the software packages to system components, the system planning tool being configured for transmitting the installation, verification and/or configuration files for installation in the system components; and	Page 8, lines 10-26; Figure 1, the data management unit 30
the system components for automatically checking and configuring specified installation, verification and/or configuration files in a prescribed order and manner, such that the system components, when configured, form the system.	Page 10, lines 21-30; Figure 2
6. A method for automatically installing and	Page 1, lines 7-13; Figure 2

configuring functionalities, stored in installation, verification and/or configuration files, for system components arranged in a distributed network, where	
a system planning tool is used to create, check and configure the installation, verification and/or configuration files for the respective system components, wherein the system planning tool comprises a user interface, a planning logic unit, a data management unit, and a planning database, in which	Page 3, lines 5-11; Figure 3, the system planning tool 1
the user interface transmits selected system options to the planning logic unit and to the data management unit,	Page 10, lines 7-9; page 3, lines 13-19; Figure 2; and Figure 1, the user interface 10
the planning logic unit uses a data and rule manager integrated in the data management unit to produce installation, verification and/or configuration plans from the system options, the installation, verification and/or configuration plans for further processing in the data management unit, and	Page 3, 21-25; page 8, lines 10-15; Figure 2; and Figure 1, the planning logic unit 20
the data management unit uses an integrated data generator to generate and configure software packages that are dependent on each other, the software packages comprising installation, verification and/or configuration files from the system options in the user interface, system information stored in the planning database, and the installation, verification and/or configuration plans produced by the planning logic unit, and ascertains installation steps for transmitting functionalities stored in the installation, verification and/or configuration files of	Page 8, lines 10-26; Figure 2; and Figure 1, the data management unit 30

the software packages to system components;	
the installation, verification and/or configuration files specified in the respective system components are automatically installed, checked and configured in the respective system components in a prescribed order and manner, and	Page 10, lines 21-26; Figure 2
the system components are configured to form an overall system.	Page 10, lines 28-30

VI. Grounds of Rejection to be Reviewed on Appeal

A. The Examiner's clear error in rejecting claims 1-5 and 11-13 under 35 § U.S.C. § 101.

B. The Examiner's clear error in rejecting claims 1-16 under 35 U.S.C. §103(a), over Bourke-Dunphy et al. (U.S. Patent Application Publication No. 2002/0133814, hereinafter "Bourke-Dunphy") in view of Hellerstein et al. (U.S. Patent Application Publication No. 2002/0129356, hereinafter "Hellerstein").

VII. Argument

A. The Examiner Committed Clear Error in Rejecting Claims 1-5 and 11-13 Under 35 U.S.C. § 101, Because the Claimed System is Clearly Structural in Nature

Appellants' claims 1-5 and 11-13 constitute statutory subject matter under 35 U.S.C. §101.

With regard to 35 U.S.C. §101 , "[t]he Supreme Court has articulated only three exceptions to the Patent Act's broad patent-eligibility principles: 'laws of nature,

physical phenomena, and abstract ideas.” *Research Corp. Technologies v. Microsoft Corp.*, No. 2010-1037, slip op. at p. 13 (Fed. Cir. Dec. 8, 2010), *citing Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). The Supreme Court has never clearly defined what constitutes an abstract idea. *Id.* at p. 14. However, following the Supreme Court’s decision in *Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010), the Federal Circuit stated in the *Research Corp* case that “[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.” *Id.* at p. 15 (emphasis added).

Appellants' claim 1 specifically recites a system for automatically installing, verifying and/or configuring functionalities stored in files for components connected in a distributed network. Such a claimed system is structural, and clearly recites specific application and improvement to technology. Claim 1 is not an abstract idea.

As such, the rejection of claim 1 , and dependent claims 1-5 and 11-13 under 35 U.S.C. § 101, should be reversed.

B. The Examiner Committed Clear Error in Rejecting Claims 1-16 Under 35 U.S.C. §103(a), Because Bourke-Dunphy And Hellerstein Fail to Disclose Appellants' Claim 1 System Planning Tool Comprising the "Data Management Unit" for Generating Software Packages for Installation in System Components and the "System Components" for Automatically Checking and Configuring Specified Installation, Verification and/or Configuration Files in a Prescribed Order and Manner, Such That the System Components, When Configured, Form the System.

The Bourke-Dunphy and Hellerstein documents, even when considered in the combination asserted by the Examiner, fail to disclose all features of Appellants' presently claimed invention.

Bourke-Dunphy discloses determining an installation procedure based on dependency requirements for components that are selected for installation. The installation procedure describes a desired order for installing selected application or service components. The Examiner acknowledges of page 7 of the Office Action that:

It is to note that, while Bourke-Dunphy discloses the data management unit uses an integrated data generator to generate and configure - (e.g. *generating installation procedure 18 - see at least [0026]*) but does not explicitly disclose the data management unit uses an integrated data generator to generate and configure *software packages* that are dependent on each other, the software packages comprising installation, verification and/or configuration files from the system options in the user interface, system information stored in the planning database, and the installation, verification and/or configuration plans produced by the planning logic unit, and ascertains installation steps for transmitting functionalities stored in the installation, verification and/or configuration files of the software packages to system components;

Hellerstein is relied upon in the Office Action as allegedly remedying the deficiencies of the Bourke-Dunphy document. Hellerstein discloses generating software packages that are candidates for installation in appropriate target machines, but does not disclose a data management unit that can produce the "system components" as claimed by Appellants.

In the Hellerstein document, a base package preparer operation 502 receives input information such as basic dependency information 506 indicating prerequisites). A base service package is then constructed for each of the regions 512, 514 and 516. When a region server receives a base service package 522, it augments the base service package with specific dependency items that are needed by the individual machines within the region by a region package augmentor operation 520. The output is a set of customized packages 530 produced for each

group of machines within the region. However, there is no data management unit as presently claimed for producing the "system components" as presently claimed. That is, neither Bourke-Dunphy nor Hellerstein disclose any data management unit which can create "system components" that can automatically check and configure specified installation, verification and/or configuration files in a prescribed order and manner to form a system.

The Bourke-Dunphy document discloses that a user follows an installation procedure to install the components and associated subcomponents. See, for example, Bourke-Dunphy: paragraph 0079. Bourke-Dunphy does not disclose that system components which automatically check and configure specified installation, verification and/or configuration files in a prescribed order and manner.

The Hellerstein document fails to overcome the deficiencies of the Bourke-Dunphy document. The Hellerstein document is concerned with generating software packages including a base service package, and customized packages. Hellerstein does not disclose "system components" that can automatically check and configure specified installation, verification and/or configuration files in a prescribed order and manner as presently claimed.

Accordingly, Bourke-Dunphy and Hellerstein, whether considered individually or in combination, fail to disclose or suggest Appellants' claim 1 system planning tool comprising, "the system components for automatically checking and configuring specified installation, verification and/or configuration files in a prescribed order and manner, such that the system components, when configured, form the system."

In view of the foregoing, reversal of the rejection of claims 1-16 under 35 § U.S.C. §103(a), over Bourke-Dunphy and Hellerstein is respectfully requested.

VIII. Claims Appendix

See attached Claims Appendix for a copy of the claims involved in the appeal.

IX. Evidence Appendix

None

X. Related Proceedings Appendix

None

XI. Conclusion

Appellants have pointed to errors in the rejections of the claims, in addition to the failure of the applied art to disclose or suggest all the recited features of the claimed invention. Appellants' respectfully request that the final rejection be overturned and the application returned to the Examiner for prompt allowance.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date August 19, 2011

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VIII. CLAIMS APPENDIX

TheAppealed Claims

1. A system for automatically installing, verifying and configuring functionalities, stored in installation, verification and/or configuration files, for system components connected in a distributed network, where the system comprises:
 - a system planning tool for creating, checking and configuring the installation, verification and/or configuration files for respective system components that are network nodes in the distributed network, wherein the system planning tool includes:
 - a user interface for transmitting selected system options to a planning logic unit and to a data management unit,
 - the planning logic unit being configured for using a data and rule manager integrated in the data management unit to produce installation, verification and/or configuration plans from the system options, the installation, verification and/or configuration plans for further processing in the data management unit, and
 - the data management unit being configured for using an integrated data generator to generate and configure software packages being dependent on each other, the software packages comprising installation, verification and/or configuration files from the system options in the user interface, system information stored in the planning database, and the installation, verification and/or configuration plans produced by the planning logic unit, and for ascertaining installation steps for transmitting functionalities stored in the installation, verification and/or configuration files of the software

packages to system components, the system planning tool being configured for transmitting the installation, verification and/or configuration files for installation in the system components; and the system components for automatically checking and configuring specified installation, verification and/or configuration files in a prescribed order and manner, such that the system components, when configured, form the system.

2. The system as claimed in claim 1, wherein following the configuration of the system components among one another an operational overall system is formed.

3. The system as claimed in claim 1 wherein the functionalities stored in installation, verification and/or configuration files are software packages.

4. The system as claimed in claim 1, wherein the overall system is a distributed network.

5. The system as claimed in claim 1, wherein the software packages store system component data and setup data for the system components.

6. A method for automatically installing and configuring functionalities, stored in installation, verification and/or configuration files, for system components arranged in a distributed network, where

a system planning tool is used to create, check and configure the installation, verification and/or configuration files for the respective system components,

wherein the system planning tool comprises a user interface, a planning logic unit, a data management unit, and a planning database, in which

the user interface transmits selected system options to the planning logic unit and to the data management unit,

the planning logic unit uses a data and rule manager integrated in the data management unit to produce installation, verification and/or configuration plans from the system options, the installation, verification and/or configuration plans for further processing in the data management unit, and

the data management unit uses an integrated data generator to generate and configure software packages that are dependent on each other, the software packages comprising installation, verification and/or configuration files from the system options in the user interface, system information stored in the planning database, and the installation, verification and/or configuration plans produced by the planning logic unit, and ascertains installation steps for transmitting functionalities stored in the installation, verification and/or configuration files of the software packages to system components; the installation, verification and/or configuration files specified in the respective system components are automatically installed, checked

and configured in the respective system components in a prescribed order and manner, and
the system components are configured to form an overall system.

7. The method as claimed in claim 6, wherein following the configuration of the system components an operational overall system is formed.

8. The method as claimed in claim 6, wherein the functionalities stored in installation, verification and/or configuration files are in the form of software packages.

9. The method as claimed in claim 6, wherein the overall system is in the form of a distributed network.

10. The method as claimed in claim 6, wherein the software packages are used to store system component data and setup data for the system components.

11. The system as claimed in claim 2, wherein the functionalities stored in installation, verification and/or configuration files are software packages.

12. The system as claimed in claim 11, wherein the overall system is distributed network.

13. The system as claimed in claim 12, wherein the software packages store system component data and setup data for the system components.

14. The method as claimed in claim 7, wherein the functionalities stored in installation, verification and/or configuration files are in the form of software packages.

15. The method as claimed in claim 14, wherein the overall system is in the form of a distributed network.

16. The method as claimed in claim 15, wherein the software packages are used to store system component data and setup data for the system components.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None